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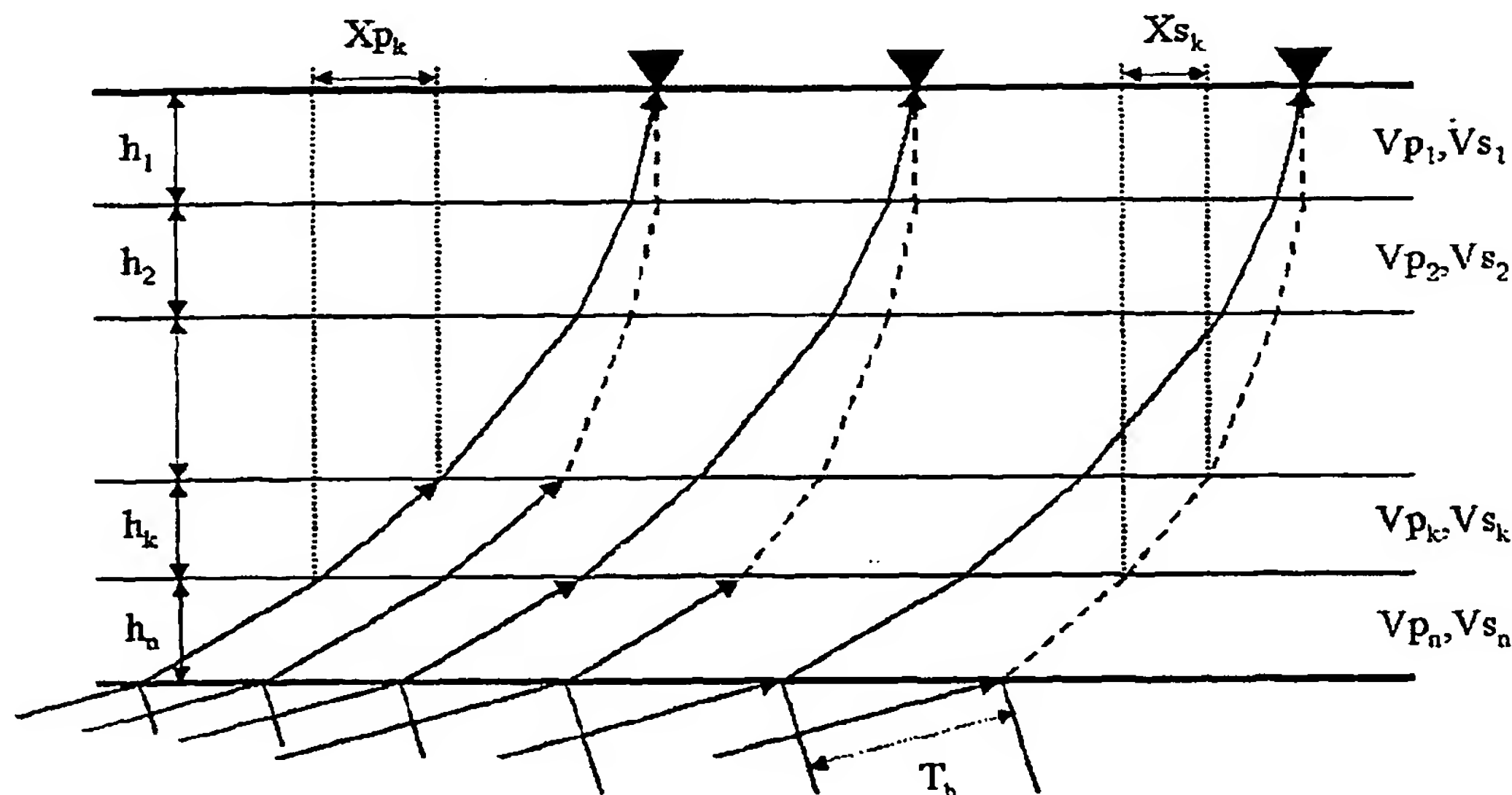
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(54) Title: **MULTI-COMPONENT SEISMIC DATA PROCESSING**



(57) Abstract: There is described a method of moveout or velocity analysis of seismic signals using the steps of obtaining such signals from a plurality of receivers, identifying receiver functions within the acoustic signals, analyzing said receiver functions for velocity or moveout characteristics, using the result of said analyzing step to determine, properties of multiple layers of earth located below said 10 receivers. The analyses can involve the use of representation of the traveltimes differences as approximated power series of slowness or horizontal distances. The method is the first to comprehensively deal with a multi-layered earth or velocity model.



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